accompanying signed Rule 132 Declaration. A copy of the Response and Amendment After Final, filed February 5, 2003 is submitted herewith.

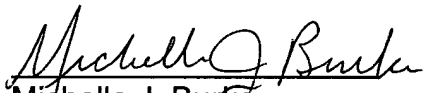
The Applicants respectfully request that the Examiner find the claims in condition for immediate allowance.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that a call may be deemed desirable by the Examiner:

Michelle J. Burke (914) 674-5459

Respectfully submitted,

BORE KLEMETS, et al.



Michelle J. Burke
Reg. No. 37,791
Attorney for Applicants

Akzo Nobel Inc.
Intellectual Property Dept.
7 Livingstone Avenue
Dobbs Ferry, NY 10522-3408

al. (U.S. Patent No. 5,466,338) further evidenced by Satterfield et al. (U.S. Patent No. 5,755,930). This rejection is respectfully traversed.

As stated in Applicant's prior response, Pearson discloses dispersion polymers useful for coagulating and retaining white pitch and does not teach, suggest, or disclose suspensions having a content of di- and multivalent cations of at least 200 ppm nor recirculation of white water together with an introduction of fresh water in an amount less than 30 tons per ton of dry paper produced. Pearson also does not disclose conductivity of cellulose fiber suspensions. The problems solved by Pearson are the problems in connection with recycling of coated brokes and sticky deposits referred to as "white pitch". Pearson does not mention any problems in connection with high conductive suspensions and there is no hint at recycling white water and therefore no disclosure of any introduction of fresh water in an amount less than 30 tons per ton of dry paper produced.

Satterfield discloses that prolonged recycling of white water contribute to the suspension being "dirty". According to Satterfield, the problem of "dirty" suspensions is solved by adding to the thin stock a slurry of filler (precipitated calcium carbonate) blended with cationic polymers (cationic starch and/or diallyl dimethyl ammonium chloride DADMAC). None of these cationic polymers are aromatic.

Satterfield also does not disclose or hint at any recirculation of white water and introduction of fresh water to form a suspension containing cellulosic fibers, and optional fillers, to be dewatered, wherein the amount of fresh water introduced is less than 30 tons per ton of dry paper produced.

The Office Action asserts that Satterfield evidences that nowadays all or at least most of the papermaking pulps have conductivity and uni-multivalent ions within the claimed range. The accompanying Rule 132 Declaration, made by Hans Hällström, a co-inventor of the subject application, shows conductivity levels of aqueous cellulosic suspensions that have been measured for 20 European, North American and Japanese

paper machines which are commercially producing different grades of paper from different furnishes in papermaking processes comprising white water recirculation. The measured conductivity levels of aqueous papermaking suspensions were within the range of from 0.5 to 5.0 mS/cm, the majority of these conductive levels of the suspensions from the paper mills were in the region of 0.5 to 1.8 mS/cm, which are below 2.0 mS/cm. The highest levels of the conductive are the result of white water closure of the mills. By the time of the invention closure of the mills was not usual. As can be seen from the Declaration, a furnish containing recycled fibers could have either low or high conductive levels 1.0 mS/cm vs. 5.0 mS/cm (see furnish Nos. 2 and 19).

Satterfield does not disclose that the papermaking pulps have conductivity and uni-multivalent ions within the claimed range. Any such conclusion is based on hindsight, which also shown in above mentioned Declaration, where the majority (80%) of the paper mills, which were commercially producing paper from cellulosic suspensions, were producing paper form aqueous papermaking suspensions having conductivity levels within the range of from 0.5 to 1.8 mS/cm.

Satterfield teaches that cationic non-aromatic polymers are better performing polymers than cationic aromatic polymers. The results of a comparison of Examples 1 and 2 in the pending application show that cationic non-aromatic polymers perform better than cationic aromatic polymers on suspensions having low conductivity (0.47 mS/cm and 1.375 mS/cm). This confirms the teachings of Satterfield. Therefore, it is very surprising that cationic aromatic polymers perform better than cationic non-aromatic polymers on high conductive suspensions as is evident from Examples 3 to 8 in the pending application, especially in view of the Satterfield who teaches that cationic non-aromatic polymers perform better than cationic aromatic polymers on "dirty" suspensions. The results of Examples 3 to 8 of the present invention contradicts the teachings Satterfield, and one of ordinary skill in the art has no incentive from the teachings of Satterfield to try to solve the problem of improving the drainage and retention performance on stocks containing levels of salt (high conductivity) by adding a

cationic polymer having an aromatic group since Satterfield teaches the contradicting feature that cationic non-aromatic polymers are better performing.

The skilled person would not have incentive to optimize the papermaking process by introducing fresh water in an amount less than 30 tons per ton of dry paper produced since Pearson does not mention conductivity of at least 2.0 mS/cm, and not even in view of Satterfield, as discussed below, as any such speculations are based on hindsight. Therefore, the invention according to amended claims 1 to 13, 15 to 17 and 21 is non-obvious over Pearson and is not evidenced by Satterfield.

Claims 18-20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C 103(a) as being obvious over Nagarajan et al. (European Patent No. 0 805 234 A2). This rejection is also respectfully traversed.

As already stated in the prior response in this pending application, the papermaking process of Nagarajan is applicable for use on all types of pulps (see page 3 lines 41 to 45) and is best suited for use on chemical pulps. Nagarajan does not mention conductivity or any problems involved with high conductive stocks and Nagarajan is silent about any suspensions having a content of di- and multivalent cations of at least 200 ppm. The test stock of Nagarajan contained formulation water, which contained 60 ppm calcium hardness (added as $CaCl_2$), 18 ppm magnesium hardness (added as $MgSO_4$) and 134 ppm bicarbonate alkalinity (added as $NaHCO_3$). In the comparison Example 2 of the pending application, the conductivity of the stock was adjusted by addition of calcium chloride (60 ppm Ca^{2+}), magnesium sulphate (18 ppm Mg^{2+}) and sodium bicarbonate (134 ppm HCO_3^-). The additions of calcium chloride, magnesium sulphate and sodium bicarbonate adjusted the conductivity levels of the stock. The resulting conductivity was measured to 1.375 mS/cm. Thus, additions of the amounts mentioned in Nagarajan resulted in conductive levels below 2.0 mS/cm. Therefore, Nagarajan does not disclose any conductive levels that fall within the claimed range of the pending application. Nagarajan further teaches that a cationic non-

aromatic polymer has better retention performance than a cationic aromatic polymer on suspensions which implicitly have conductivity levels below 2.0 mS/cm, see above. The results shown in Table I and Table II show that Polymer B (10 mole % DMAEA.MCQ) had better retention performance than Polymer A (10 mole % DMAEA.BCQ). Polymer A is a polymer containing benzyl groups and Polymer B is a polymer containing methyl groups.

Nagarajan does not mention white water closure of paper mills. There is no inherent disclosure of high conductive furnish, since conductivity is not necessary related to the type of furnish. By mentioning "applicable for use on all types of pulps" it dose not necessary follow that the furnish is highly conductive (see furnish Nos. 2 and 19 of the accompanying Declaration).

Nagarajan does not disclose any fresh water introduced into the system and does not mention conductivity. Nagarajan discloses that the test stock contained formulation water, which contained 60 ppm calcium hardness (added as $CaCl_2$), 18 ppm magnesium hardness (added as $MgSO_4$) and 134 ppm bicarbonate alkalinity (added as $NaHCO_3$). The conductivity level of the formulation water is not disclosed.

Therefore, one of ordinary skill in the art has no incentive to optimize any introduction of fresh water into high conductive stocks since there is no mentioning of high conductive stocks nor an indication of any benefits of the drainage and retention aid on high conductive stocks disclosed by Nagarajan especially since the examples of Nagarajan show that a non-aromatic polymer had a better performance than an aromatic polymer. There is nothing disclosed by Nagarajan that would provide any incentive for the skilled person to develop a process wherein an cationic polymer having an aromatic group is used as retention and drainage aid in a process where fresh water is introduced in an amount less than 30 tons per ton of dry paper produced. The claimed invention is not anticipated by Nagarajan and is non-obvious over Nagarajan.

Claims 18-20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C 103(a) as being obvious over Pearson et al. (U.S. Patent No. 5,466,338). The Applicants respectfully traverse this rejection.

As discussed above and in Applicant's previous responses, Pearson discloses dispersion polymers useful for coagulating and retaining white pitch and does not mention anything about any suspensions having a content of di- and multivalent cations of at least 200 ppm nor recirculation of white water together with an introduction of fresh water in an amount less than 30 tons per ton of dry paper produced and Pearson does not disclose conductivity of cellulose fiber suspensions. The problem solved by Pearson is the problems in connection with recycling of coated brokes and sticky deposits referred to as "white pitch". Pearson does not mention any problems in connection with high conductive suspensions and there is no hint at recycling white water and therefore no disclosure of any introduction of fresh water in an amount less than 30 tons per ton of dry paper produced.

Therefore, the skilled person would not have any incentive to optimize the papermaking process by introducing fresh water in an amount less than 30 tons per ton of dry paper produced since Pearson does not mention conductivity of at least 2.0 mS/cm. Therefore, the claimed invention is not anticipated by Pearson and is non-obvious over Pearson.

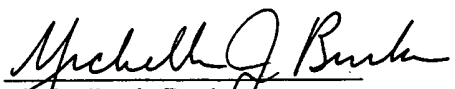
In view of the above discussion of the cited documents and the statements set forth in the accompanying Declaration, the Applicants respectfully request that the Examiner reconsider the rejection of claims 1-13 and 15-23 and find the claims in condition for immediate allowance.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that the Examiner deems a call desirable:

Michelle J. Burke (914) 674-5459

Respectfully submitted,

BORE KLEMETS, et al.



Michelle J. Burke
Reg. No. 37,791
Attorney for Applicants

Akzo Nobel Inc.
Intellectual Property Dept.
7 Livingstone Avenue
Dobbs Ferry, NY 10522-3408
(914) 674-5459